

A STUDY ON THE USER BEHAVIOUR WITH ONLINE LIBRARIES DURING COVID - 19 PANDEMIC PERIOD

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Libraries are the foundational institutions in wisdom civilisation of the human kind over the years. They have evolved with the scientific technology development and are now made available as digital libraries. These digital libraries are accessible to the citizens of the world borderless. This has revolutionised the way the libraries are accessed which keeps evolving. During the recent pandemic “Covid 19” the world went in for lockdown and people were idled in their homes and they use their spare time to enhancing their knowledge vistas. This study aimed at understanding the online library user’s behaviour, preferences and experiences during Covid 19 period. It was conducted with a questionnaire circulated through online surveys. It was found that users have different perspectives and perceptions towards online libraries. The purpose to access the libraries are more for serious academic need which prompts to conclude that online library user behaviour, preferences and experiences are not inferior in quality compared to offline libraries. Unlike the typical academic library preferences, the users opt for multiple specialisation areas to read and acquire knowledge. The papers offers suggestions to make the online digital libraries effective such as integration of online libraries effectively with the offline libraries and offering services to the users of the offline libraries in the same modality of academic institutions.

Keywords: Online Library, Online Resources, Offline Library, Personnel Libraries, Free Library Resources, COVID19, User behaviour

INTRODUCTION

Libraries are the power houses of wisdom and imagination. The pseudo living souls in the form of books help the seeker to open a new world every time he goes to read a book and thus opens up new vistas of life for the reader. Traditionally the visualisation of Libraries has been physical buildings with printed books and materials systematically arranged as per the categories, properly numbered, named and organised. However, the libraries are now of two types namely, offline libraries and online libraries. The qualities of offline libraries have not changed much over the period of time excepting the introduction of digital systems, digital books, journals and magazines and other resources as part of library offerings. Library

usage by those pursuing academics, for their success is a known phenomenon.

The methodology of storing information transformed over a period of time. From storing the physical books, the libraries have been turned into digital libraries in the UK and US from the 1990's. However, during the Covid 19 pandemic the utilisation of the digital libraries became common everywhere. The countries where Covid 19 was prevalent were adopting online classes to substitute the absence of physical class rooms. This has effectively influenced all countries across the world to transform their academic learning methodologies from physical class rooms to digital classrooms.

It is pertinent in the research perspective to study to understand the role of libraries in the academic process. A study by McCarthy, Sandra Calemme (2017) in their research on "At issue exploring library usage by online learners with student success" (McCarthy, Fall 2017) observes that, this study was aimed to establish the relationship between library usage and success rates among online students. The findings of this study provide a contextual understanding on the probable online library usage by the students, especially when they were attending online classes and online examinations during this pandemic period.

The online libraries are organised and offered in the web which has much and many more features compared to the offline libraries. The perception, experiences and behaviour of the users may be different in both the types of libraries. This study aimed at studying such

behavioural profile of the users in specific period like the pandemic period. During the pandemic period all physical libraries were closed across the world and the users were compelled to use the online libraries.

COVID - 19 AND ITS IMPACT

Sometime in December 2019, Wuhan city in China reported its first cases with Covid 19 virus impact. Since then, the virus spread all over the world, and it ended up as a Global Pandemic very soon. Covid 19 is new to mankind and its impacts are very dangerous in its proportion of congeniality and its worst impact by way of causing sudden loss of life of those affected. It completely disrupted the public health system, food chains and supplies and the work life of all human beings across almost all nations. The disruption caused by Covid 19 were not just health oriented by social and economic oriented. The strongest outcome of Covid 19 was the devastating impact on global economy, disruption of work life for everyone and thus making people go into sudden poverty. WHO estimated that by the end of 2020 it would lead 132 million people to enter poverty according to its reports. (Kimberly Chriscaden, 2020). Since the whole world went into lockdown all markets were closed, exports were completely banned and people lost jobs, especially those who were engaged in unorganised sectors and independent workers. This prompted people to look for additional competencies for which they started depending on online libraries.

Covid 19 also disrupted the global education to its fullest extent. Covid 19 was termed as most

incisive generational catastrophe and thus with the advice of WHO and other world bodies nations across the world locked down their educational institutions indefinitely. This was one of the most effective mitigating measures taken by the governments. UNESCO established a Global Education Coalition (UNESCO, 2020) comprising 160 members to work on the central themes like, Gender, Connectivity and Teachers in order to keep the continuous learning process for the students in spite of lockdown.

Globally (UNESCO, 2020) 127,959,411 students were affected with the lockdown. In most of the countries the educational institutions were closed for almost 41+ weeks. Immediate response through the global institutions by establishing development and coping coalitions have had their own strong impacts by leveraging the global technological prowess to keep the education system alive and functioning. Sustaining these educational coping mechanisms had a great impact on the learning community. This global coalition of coping mechanisms proactive initiatives resulted in creating creative possibilities in the world of education. Educational systems because of the technological pervasion became global in this process. There were online classes and courses apart from International Libraries which were made available to students across India by some of the world's greatest institutions, which otherwise would not have been accessible to the non-privileged. (UNESCO, 2021). In India approximately 29.9 core or 299 million students' education got disrupted. India responded with complete lockdown forcing all educational institutions

close indefinitely. However Indian educational system quickly adopted online education to cope with the loss of time. The positive side of this is that digital education got enormous push in the country by virtually all institutions adopted online for classes, exams and evaluations.

REVIEW OF LITERATURE

The transformation of libraries is through the disruptive digital technologies. This disruptive evolution has given effected a paradigm shift in the library format itself. Physical libraries from being knowledge sources the digital libraries have transformed the libraries to be knowledge creators. The use of digital libraries has pervaded in the lives of every knowledge seeker across the world, even those who were not using physical libraries

According to Borman's (Borman, 2013) three layers' knowledge people use to do searching Internet based libraries. They are 1. Conceptual Knowledge 2. Semantic Knowledge and 3. Technical skills. The internet pervasion in the daily lives of every human being is manifested through the behavioural modifications in the way human beings seek knowledge. In a survey conducted by PEW research they observed several critical behavioural differences amongst the library users when they were using traditional libraries and when they are using the digital libraries. This study is pertinent to provide an insight into the perception and adoption of technology by the library users.

After introduction of digital publication era the usage of print media reading changed drastically. This study observed the following.

Results of the statistical analysis showed print journal usage decreased significantly since the introduction of online journals ($F(1,147) = 12.10, P < 0.001$). This decrease occurred regardless of whether a journal was available only in print or both online and in print. Interlibrary loan requests have also significantly decreased since the introduction of online journals ($F(2,30) = 4.46, P < 0.02$).

The academic research habits of the college students have widely changed after the introduction of the digital educational resources. A study conducted by Anna M. Van Scoyoc and Caroline Cason on *Library: Undergraduate Research Behaviour in a Library without Books*, (Anna, 2006) they have observed that electronic library does not function as part of the traditional library, undergraduate students primarily use internet sites and online instruction modules for their research needs and the academic class status does not have any impact over the access to academic databases or research resources.

Christen Thompson in a research paper on “Information Illiterate or Lazy: How college students use the web for research” in 2003 (Thompson, 2003) observed that, the research designs and research methodologies need to be innovated for people pursuing research in this digital era instead of using traditional research designs and methodologies.

Online teaching became a normal pedagogical methodology at all levels across the world due to Covid 19, which lockdown the nations, and its educational institutions across the world. In a research finding through a research paper on “Covid - 19 and online teaching in higher

education: A case study of Peking University” (Bao, 2020), Wei Bao observes the following. There are five principles of high impact practice to effectively deliver large scale online education. First, the quantity, difficulty and length of teaching content should match with the academic readiness and online learning behaviour characteristics of the students. Second, the principle of effective delivery, the students’ characteristics of low concentration in online learning and the adjustment of teaching speed to ensure the effective delivery of teaching purpose. The third is pertaining to the sufficient support, which includes faculty and teaching assistants with timely feedback, including online video tutoring and digital guidance. The fourth is the necessary to adopt some measures to improve the degree and depth of student’s class participation. The last principle is pertaining to the contingency plan preparation. The anxiety challenges of the students will have to address along with the above principles to ensure actively and effectively engage the students in online learning.

OBJECTIVES OF THE STUDY

The following identified as objectives for this research study.

1. To study the multidimensional impact of online library and its usage.
2. To understand and analyse the online library user behaviour.
3. To know about the online library usage during the Covid 19 lockdown period.
4. To study the impact of online libraries over the people who were forced to stay indoors
5. To offer suggestions to online libraries on the basis of data analysed from this research

LIMITATIONS

This research study had the following limitations.

1. Constraint of limiting the research to online libraries and specifically during Covid lockdown period.
2. The geographical coverage could not be widened due to restraining constraints.

METHODOLOGY

This research study has been conducted using online survey method. Due to Covid – 19 restrictions the research had to be conducted through online personal contact mode. Hence the research processes were carried over through telephone and using online resources, which used social network sites effectively.

Participants

The research was conducted amongst 100 participants. The participants included students studying in schools and colleges. It also included others who are pursuing various other academic pursuits. Apart from those who were connected in direct academics, people having general reading habits also were included in this study. The participants were identified through social media network contacts.

Instruments

An online questionnaire containing 45 questions were circulated amongst the participants. The questions contained MCQ type of questions with the options carefully researched and shortlisted.

Procedures adopted

Before circulating the questionnaires, the participants were chosen randomly and were asked to answer the questions with proper introduction and stating the purpose of the research. They were asked to fill in the questionnaire.

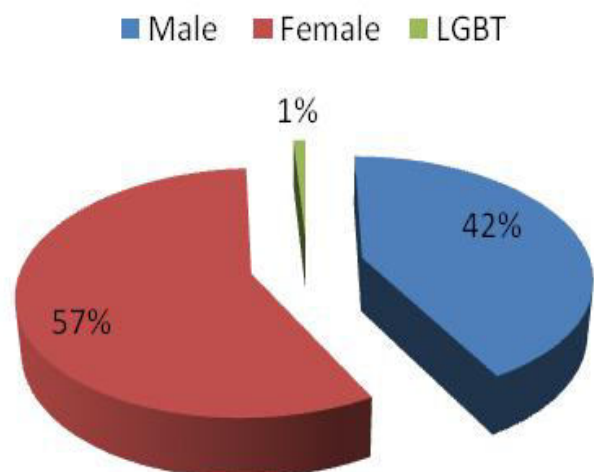
DATA ANALYSIS AND DISCUSSION

The data collected were analysed using simple statistical tools and the presentation was prepared using the graphical tools. For the purpose of analysing the data, it was collated and treated for authenticity of data. The analysed data has been discussed in detail along with interpretation as follows:

Gender Distribution

The gender distribution (Figure-1) the research is well represented in the gender perspective with 57% of male respondents and 42% of female respondents and 1% of the third gender.

Figure -1 : Gender Distribution



Age Distribution

The Age distribution in this study is found to be a composition of most of the age groups. (Table-1) Predominantly the respondents belong to the age group of 21-25 years with 72.1% followed by below 20 years of age. The rest of the age groups from 26 years and above are representative only in the region of 2.3+ % and with 7% of the respondents in 46-55 years age group.

The findings clearly points that those who are millenials are more digital library users as against other age groups. This findings establishes the dependency of the library users below 25 years on the digital platforms compared to other age groups.

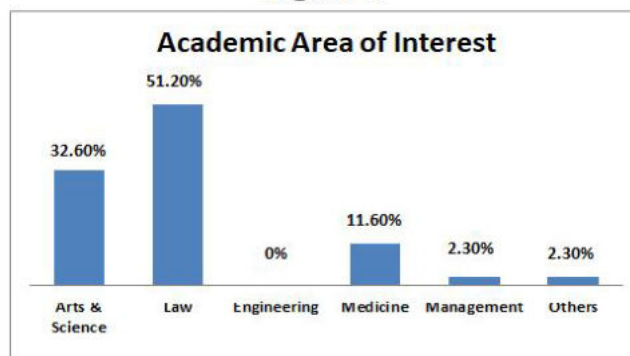
Table-1

Age Distribution			
Sl.No.	Description	Age Distribution	%
1	Below 20 year of age	6	14.0%
2	21 - 25 years of age	31	72.1%
3	26 - 30 years of age	1	2.3%
4	31 - 35 years of age	0	0.0%
5	36 - 40 years of age	1	2.3%
6	41 - 45 years of age	1	2.3%
7	46 - 55 years of age	3	7.0%
8	Above 55 years of age	0	0.0%
	Total	43	100%

Area of Interest

Amongst the respondents (Figure-2) 51.20 % have law as their preferred area of academic interest followed by Arts and Sciences with 32.60 %, 11.60% have medicine as their area of academic interest while 2.3% are interested in Management and 2.3% are interested in Other academic areas.

Figure-2

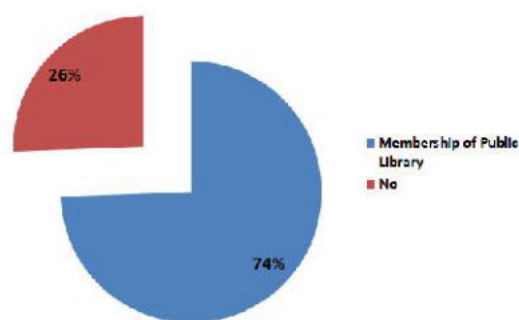


The above composition of the respondents represents multiple areas of academic interests hence, the preference for digital libraries is analysed from multiple academic interest perspectives.

Membership in Public Library

Among the respondents 74.4% have regular membership in public libraries (Figure-3) while 25.6% do not hold it. The membership in the public libraries enables the members to borrow books and take it home to read, apart from giving them access to all the books and journals in the library. Public Libraries have a long history of existence across the world and are meant to help the citizens get free access to reading materials at free of cost and helped people to get exposure

Figure-3
Membership in Public Library

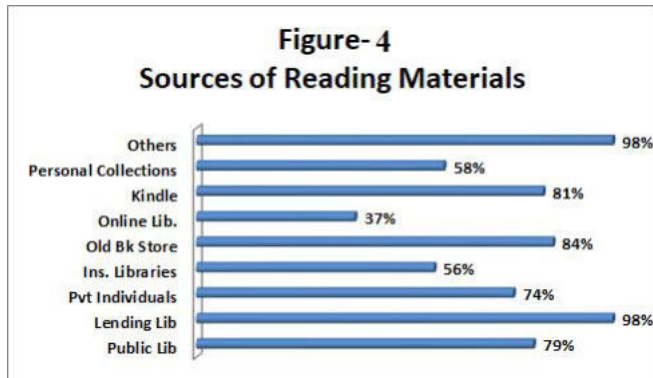


to different ideologies and develop their own thought process.

This finding which suggests almost 3/4th of the respondents are members in public libraries is a very note worthy finding that gives out the hope that reading habit would sustain irrespective of the social media development and digital media developments.

Sources of Reading Materials

2.3 % of the respondents prefer lending libraries to access their reading materials (Figure-4). 20.9 % prefer public libraries and 18.6 % prefer kindle reader. 16.3% depend on the old books store for getting their reading materials. Amongst the respondents 25.6% prefer to get their reading materials from known people while 44.2% depend on their institutional libraries. 41.9% possess personal collections to read while 62.8 % completely depend on the online library resources and only 2.3% are using other sources.

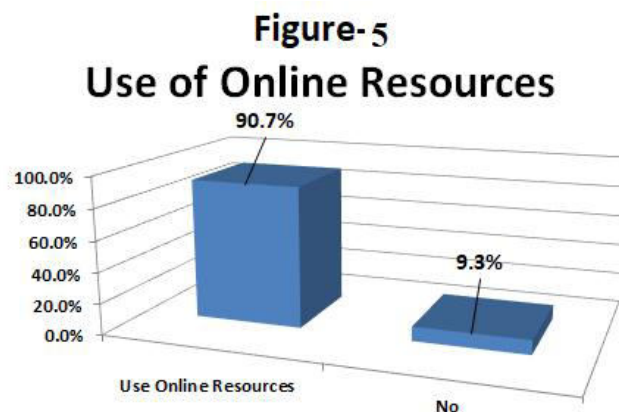


This research finding suggest that most of the respondents use online libraries. The technology development adaptation in seeking knowledge resources thus becomes evident. Also the research suggests that institutional libraries are most preferred source followed by personal

collection which is ranked as second important resource of reading materials.

Use of Online Resources

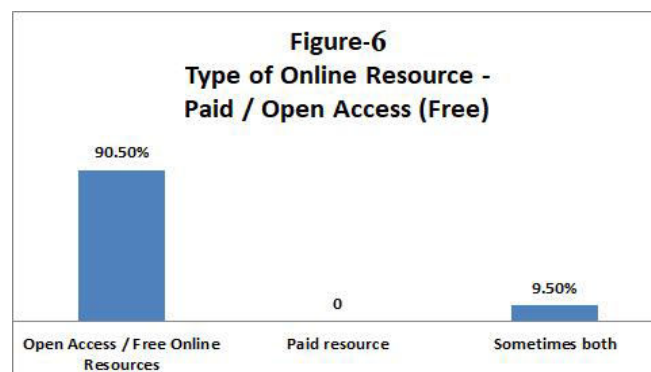
Amongst the respondents 90.7% of them use online resources for their reading purposes, while 9.3% of them do not use online resources (Figure-5).



Findings reveals the dependency of the respondents on the online resources. The ease of, reach, search and use of the reading materials are the critical factors in this study finding.

Type of Online Resources Used

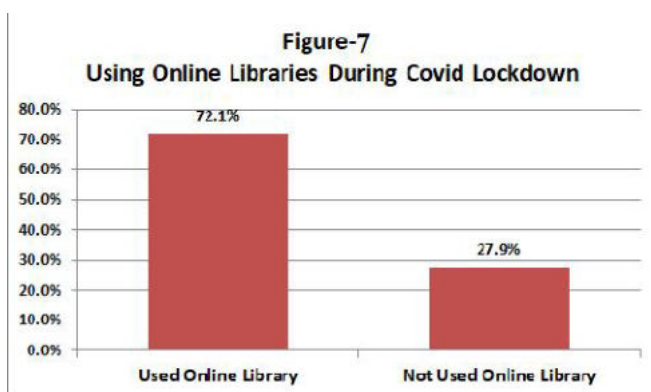
Only 9.5% of the respondents use sometimes both the paid and free resources in online resources while no respondent uses paid resources (Figure-6).



This finding reveals that when there is a strong need only, the respondents prefer to spend money to access online resources and otherwise they prefer to use only free resources. The easy availability of the information from multiple web resources could be one of the influencers of this finding.

Using Online Libraries During Covid Lockdown

Online library reference is very helpful for every library user. Because, by and large each of the online library has a specialisation and it accumulates online materials in the specific area. This makes it possible for knowledge seekers to focus on specific libraries for seeking information and knowledge from specific online library. Globally widely present online libraries are excellent sources to expand the horizons in knowledge perspectives. Hence, learning initiative can actually bloom with the knowledge seeker using online libraries. The pandemic era gave opportunity to people to come up with some very creative ideas, solutions, creations and literature with the presence of online resources.



Amongst the respondents 72.1% of them used online libraries during Covid Lockdown

(Figure-7). This usage percentage should have been prolific within two weeks of the first wave Covid lockdown across the globe. Because every online library user is discerning and aspiring user. They reliance and dependency was multiple times more during Covid era and it has sustained past Covid era also. Increased online classes and online education system migration had influenced the need for online libraries more than ever during the Covid period. More than just using the web for routine classes, assignments and assessments the online helped people to get themselves multiskilled. There were many globally acclaimed institutions which offered free courses for which people can sign up and start learning with the provided resources. This kind of upskilling courses were used by people like never before. Further the instant help in academic courses also were made available to people free of cost. Apart from all these the streaming video platforms were a common mode of interaction for people across the globe and meetings, conferences and all kinds of performance arts were streamed using these platforms. All of the above inspired people to engage with online libraries more during Covid period.

Inspiration in using Online Libraries in Lockdown

Inspiration and reasons to use online libraries were different for different users (Table-2). However to measure up the influence of some of the factors would yield an important dimension to the preference patterns of the users. Hence this research study queried the respondents with a multiple choice questionnaire with eight factors. Making good use of time during the Covid

Lockdown is one of the felt needs of the people undergoing lockdown. 48.8% of the respondents expressed in order to make good use of their time they used online libraries, while 46.5% used online libraries for learning a new subject. 27.9% of the respondents were inspired by the eagerness to use the freely available resources. 20.9% are inspired to use for preparing articles, 16.3% are inspired to use the online library for leisure reading, 2.3% for other reasons and 9.3% for killing time.

Table-2
Inspiration In Using Online Libraries In Lockdown

Sl.No.	Description	Yes	NO
1	Make Good Use of Time	48.8%	51.2%
2	Learn a New Subject	46.5%	53.5%
3	Prepare Article	20.9%	79.1%
4	Utilize Freely Available Resources	27.9%	72.1%
5	Kill Time	9.3%	90.7%
6	Leisure Reading	16.3%	83.7%
7	Curiosity to Explore & Learn	0.0%	100.0%
8	Other	2.3%	97.7%

The respondents are inspired by the reasons like making good use of their time and learning new subjects. The change in the mindset of the people to adapt to new system of learning in a new unprecedented situation towards learning shows the eagerness of people to learn and evolve themselves. Eagerness to use freely available resource as an inspiration is yet another pointer to conclude the interest level of the people to make use of the resources available at their reach for their own betterment. During Covid lockdown period which was unprecedented and unexpected online library was one of the most creative and solid useful mechanisms made available to people across the world and most of them were free. Excepting 9.3% of the respondents all others

were inspired to use online libraries for any one of the reasons identified for the research study.

Table-3
Reasons for Not Using Online Libraries

Sl.No.	Description	Yes	No
1	Didn't Feel the Need	2.3%	97.7%
2	Felt Boring	0.0%	100.0%
3	Didn't Find it Interesting	7.0%	93.0%
4	Could not Spend Screen Time for Reading	11.6%	88.4%
5	Could not Concentrate	7.0%	93.0%
6	Felt Tired / Sleepy Quickly	4.7%	95.3%
7	Felt not Useful	0.0%	100.0%
8	Other	4.7%	95.3%

Reasons for not using Online Libraries

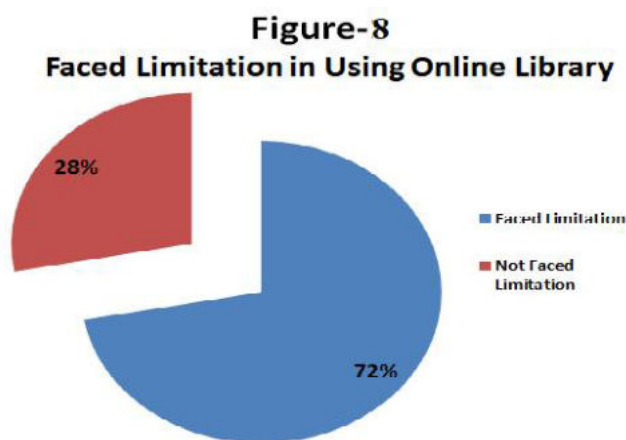
During Covid lockdown period in spite of online digital libraries being made available there were people who were not interested in using them for various reasons (Table-3). This research study wanted to identify the reasons for people not opting to use online libraries with eight parameter multiple choice questionnaire. 2.3% of the respondents did not feel the need to use an online library while none found it boring. 7% of the respondents felt they did not find it interesting. 11.6% of the respondents expressed that they could not spend the screen time to read online. 7% felt they were not able to concentrate while using an online library. 4.7% of the respondents are of the opinion that they felt tired and sleepy after started to using an online library. 4.7% of the respondents were not using online library while none of them expressed its not felt to be useful.

This finding reveals that online library usage is gaining ground in all of the above reasons of rejections. There is significantly less percentage of the respondents who are not using library and the reasons they attribute predominantly is that, they are not able to spend the required screen

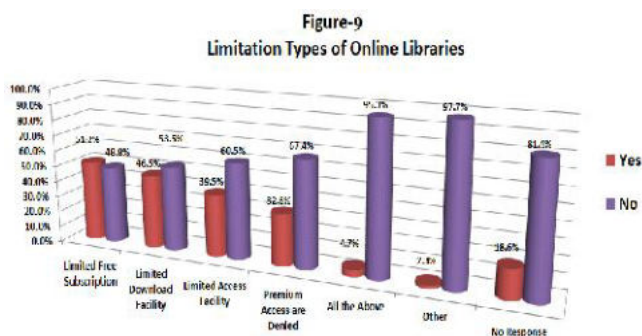
time. The online libraries would, in the future may develop technological tools to enhance the perceptual experiences of the user to much higher level.

Limitation of Online Libraries

While using online libraries some of the users faced limitations (Figure-8). 72.1% of the respondents expressed they faced limitations while 27.9% of the respondents expressed they did not face any limitations.



With regard to what kind of limitations faced by the respondents (Figure-9). The question was framed in the form of multiple choice question with 7 factors. 51.2% of the respondents expressed they faced limited free subscription as a limitation, 46.5% of the respondents expressed they faced the limitation of limited download



facility, 39.5% of the respondents expressed they faced limited access facility, 32.6% of the respondents expressed they faced limitations in the form of premium access being denied, 2.3% of respondents expressed they faced other type of limitations and 4.7% faced all of the limitations above. 18.6% of the respondents did not respond to this question.

Considering the above data it can be inferred that the users expecting free subscription and free download facility faced it as limitations apart from the access facility and premium access being denied. The users of digital libraries across the world wish to use the digital libraries as free resource. The paid knowledge portal services has not gained wide acceptance due to various reasons. However, over a period of time the users would get used to the paid services which would enhance the quality of content and services apart from navigability.

Gadgets Used

People use different gadget to access online materials (Table-4). The research question was framed to know which are most used gadget amongst the respondents. For reading purpose 90.70% use mobile, 53.5% use laptop, 23.30% use tablet, 14% use desktop, 7% use kindle, 4.7%

Table-4
Gadgets used for Online Reading

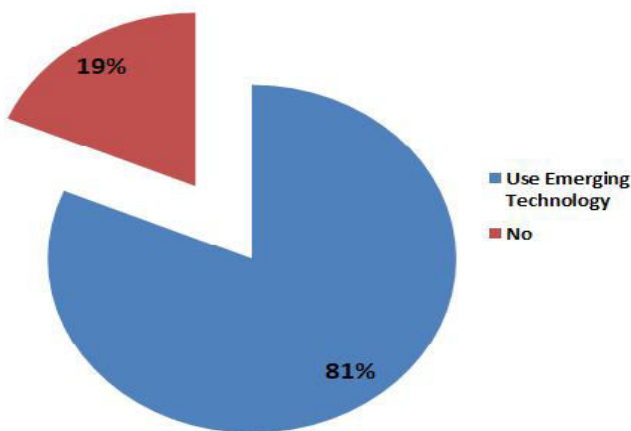
Sl.No.	Description	Selected	Not Selected
1	Mobile	90.7%	9.3%
2	Laptop	53.5%	46.5%
3	Note Pad	4.7%	95.3%
4	Desktop	14.0%	86.0%
5	Tablet	23.3%	76.7%
6	Kindle	7.0%	93.0%
7	Other	2.3%	97.7%

use notepad and 2.3% use other gadgets. Since mostly people spend time in their mobiles, it is easy for them to use thier mobile itself for reading purposes also is what we can infer from the above data. Though the available screen size is small the usage ease gains prominence over the comfort of reading along with the freedom of accessibility even when they are mobile.

Use of Emerging Technology

Emerging technologies would be used for online library (Figure-10) to evolve itself is the opinion of 81% of the respondents and 19% are not affirmative about it. However the adaptability of the emerging technologies may be delayed but eventually they will be used to become a part of the online library offerings in the future.

Figure-10
Use of Emerging Technology



Your Recommendation to others

Amongst the respondents 86% of them positive about recommending the online resources they have used to others while 14% may not (Figure-11). When a user recommends a

Figure-11
Will Recommend use of Online Resources

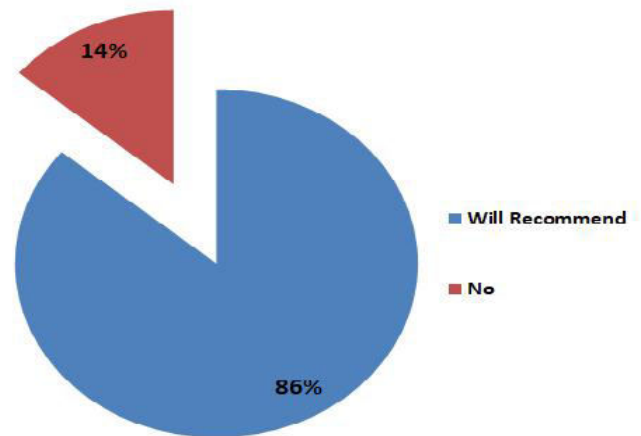
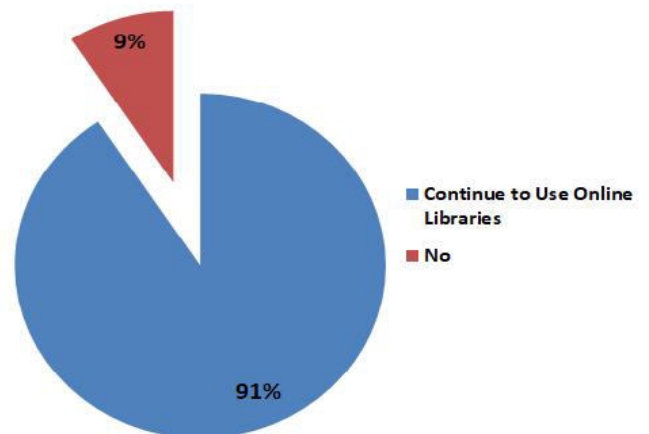


Figure-12
Continue to use Online Libraries



online resource to someone he adds on the credibility to the website with his experiences and exposure. This would be an added advantage to the new users to try the same in confidence.

For a query on whether the repondents would continue to use online libraries (Figure-12) 91% were positive about using them regularly in the future while 9% may not continue as regularly as they have been doing.

SUGGESTIONS

1. Academic institutions play a vital role in motivating their students to try online libraries. Initiatives taken by them to design assignments that may involve using online libraries would enhance the usage of online libraries.
2. The research designs and research methodologies need to be innovated for people pursuing research in this digital era to suit the current research ecosystem instead of using traditional research designs and methodologies for current research processes.
3. Online libraries may provide freedom of access to the materials they hold which may pertain to their field of specialisation. This would motivate the users to try more with the online libraries.
4. Online forums can be created by online library users to share their mutual interests and information relating to online libraries. The more the users get to know about the online library and their uniqueness the users may be motivated to try and use them more.
5. The material available with online libraries can be stored in many different formats which may be use to the users.
6. Online scratch pads attached to the online library may be very helpful to the users to take notes and move forward with further usage.
7. Online libraries can be made available free of subscription costs for the users to try during periods like the lockdown period. This would help both the online libraries to increase their membership and also the users to try new libraries and new resources, thus using their free time productively.
8. Online libraries may tie up with institutions related to their specialisations thus educational institutions would be able to offer short time courses with the academic support from the said online library. Such course availability during covid might have helped many people to acquire additional educational qualification.
9. During the lock down periods if mass media shares information about online library availability it would help general public to get awareness about the online libraries and the usage would be better. The users will also start benefiting more.
10. Online libraries would be better used by the common users if they have access to the same through their public libraries. Public libraries can have global tieup with the online libraries and offer its services to its members as educational institutions offer them to its students.
11. The discerning users of digital libraries may consider trying multiple online libraries to get wider understanding of the contents and the core of the library. This would help the users to identify the best online source for their academic or reading purposes.

CONCLUSION

The above study focused on the online library and its user behavior especially during Covid 19 lockdown. The paper is organised with an introduction chapter which has detailed the online and digital libraries available in the web. The usage patterns and other relevant details are discussed along with Covid 19 impact on a global scale. The

objectives are defined for this study and the five overall objectives were identified for this study. There were few limitations for this study which has been enumerated as a sequence to the first chapter. The findings and interpretations chapters deals with the findings through the questionnaire which was used to collect the primary data. The secondary data were used from different sources and their references are given in the bibliography. The findings is discussed in detail with the interpretations on the data reflected in the research for the particular query. The interpretations is based on the global view of the online library usage patterns. The suggestions list the interventions that can be considered to enhance the reach of the online library to the users and to enhance the user experiences.

This paper is a minor research paper to cover this vast area. However further researches have to be carried out on a larger scale with wider scope and targeting wider audience to cover this research's limitations. Such research work when carried out and brings in findings, interpretations and suggestions it may provide opportunity to introduce larger number of initiatives to enhance the overall experiences.

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